What's in *Your* File Cabinet? Leveraging Technology for Document Imaging and Storage

By William Flaherty

Today's document-imaging systems are not your parents' systems. You can capture documents, tag them, and sort them into electronic file cabinets and folders without turning on a computer. Since files are date stamped, you can purge them automatically based on the rules of your retention schedule.

The secret to the magic is the programmability of the new generation of systems.

Spotsylvania County Public Schools (SCPS) in Virginia uses a document-imaging solution that leverages the features of a multifunction printer (MFP). An MFP is a printer, scanner, fax machine, and copier all rolled into one. It can scan a document and email it all in one easy step.

Software is available that allows the MFP to scan bubble sheets and score student tests. This device

Document-imaging systems make data capture and retrieval easy and efficient.

communicates directly with back-end databases; no computer is required. Data elements are entered from a keypad on the MFP. The system takes the data and the scanned images and captures them in a database. Other databases can also be linked to this system to create an even more powerful supersystem.

In the past, there were document-imaging systems for documents and data systems for data. Today, these new docudata systems are emerging.

Older document-imaging systems require a large investment in both hardware and personnel. Most organizations create a scanning department with two or three people dedicated to scanning documents. They then use the proprietary imaging software to tag the documents. This process allows users on the network to access the documents they are entitled to view.

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These systems require intense training for those who scan the documents. Since there are only a few scanners, a bottleneck within the organization is often created. Since the process is labor intensive, there is the potential for mislabeling documents.

The new systems distribute the scanning workload by allowing any authorized user to log on to the scanner. After logging on, the user is presented with a menu of scanning applications. The user selects an item, answers a few questions, and then steps back while the documents are scanned. The scanned documents are then automatically associated with the appropriate databases. The program stays in a loop until the process is complete. The user can choose another scanning application or log off.

This method has many advantages.

Each school or department scans its own documents. Since the scanning process is distributed across the organization, there are no choke points in getting information into the system.

Virtually no training is necessary because the user simply responds to the prompts on the MFP. The programmer does the real work before the application is distributed to the MFPs. Validation and error checking are built into the program to ensure errors are eliminated before they become part of the system.

The MFP keypad can be programmed to be interactive. For example, if a student identification number is entered, the program can return a student name for verification directly at the device. Since the information is captured in a database, the application is totally programmable using any variety of standard programming tools. The scanned documents can also be viewed using nonproprietary applications. SCPS is even using Picasa, a free viewer from Google, to look at documents stored in its online applicant tracking system.

Saving Money, Freeing Space

Until last year, SCPS did no document imaging. What a difference a year can make! The district is attacking its file storage problem from two directions. We are establishing procedures to eliminate documents even before they are stored in a file cabinet.

We've also created a position specifically to help us get our records under control. Boxes of documents that have been stashed in various locations around the district are transported to a central climate-controlled warehouse. Our dedicated employee culls the files of any documents that do not need to be retained. These documents are then shredded. Files that are near the end of the retention cycle are stored and then shredded at the appropriate time. The remaining files are scanned and then disposed of properly.

For the past decade, schools have been responsible for retaining the records of graduating seniors. In Virginia, certain documents in a student's permanent record must be retained for 5 years after the student graduates, while other documents must be kept for 75 years. The vaults in the schools are quickly running out of space.

This new system came along just in time. A program was written so these documents are stored with a 5-year or 75-year tag. After 5 years, the appropriate documents are automatically deleted from the system. The automated process not only eliminates the laborious process of going through records and discarding them, it puts the documents online districtwide. When the superintendent's office receives a request, a pdf can be emailed to the requester.

The ease with which information can be retrieved is based on the number of tags associated with a document. In a traditional system, the operator must associate each tag with a particular document or group of documents. The new system associates the document with a database, which means that every field in the database becomes a potential tag.

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If a health physical form was tagged at the MFP with just the student identification number, then everything in the student information system is a tag for that document. It is easy to display or print the health physical forms for all the fifth graders in a particular school or for a class within the school. A person trying to retrieve a form can simply search by the student's name without

having to know the student's identification number. The possibilities are endless.

Electronic portfolios are being used more and more in the education community for both students and teachers. In Virginia, a portfolio of student work collected throughout the year can be submitted in lieu of the state standardized test. Until last year, six-inch binders were created for each student. The binders were filled with sheet protectors containing student work sheets. If a teacher wanted to add a PowerPoint presentation or a video clip of a student performing a skill, he or she would have to burn the file to a CD, label it, and place it in a sheet protector.

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The district has now replaced these binders with an electronic solution. Work sheets are scanned into the system in any order. Virtual files are added using a process similar to attaching a document to an email. The program automatically arranges the student's work, paper or virtual, in the correct order for scoring. Scorers log on to the system and can score the electronic portfolios online. They can even leave notes giving teachers feedback on the student's work.

Teachers, subject area specialists, and principals can review the new electronic binders online right from their desks or from the comfort of their homes.

Benefits Multiplied

Jerry Hill, SCPS's superintendent, says, "In today's difficult financial times, school districts need to become more efficient. This new generation of document-imaging systems provides us with just these efficiencies."

By moving from laborious paper-based tasks to electronic storage and retrieval, the district has realized multiple benefits: reclaimed space that had been dedicated to storage, no dedicated staff to scan documents, a single piece of equipment for multiple functions, and lighter staff workloads.

SCPS has made great strides in its efforts to capture information in databases, but we still need to have certain documents in their original format. These new systems provide this capability while leveraging the speed and flexibility of database access.

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